MAINTENANCE LINK USING ACTIVE/STANDBY REQUEST CHANNELS

Abstract of the Disclosure

Multiple field units in a CDMA system are synchronized for communication with a base station using shared forward and reverse link channels. In an illustrative embodiment, each field unit is assigned a time slot in a forward link channel to receive messages from the base station. Likewise, each field unit is assigned a time slot on a common reverse link channel for transmitting messages to the base station. Timing alignment and power level control among each of many field units and the base station is achieved by analyzing messages received at the base station in a corresponding time slot as transmitted by each field unit. Thereafter, a message is transmitted from the base station in a corresponding time slot to a particular field unit for adjusting its timing or power level so that future messages transmitted from the field unit are received in the appropriate time slot at the base station at a desired power level. In this way, minimal resources are deployed to maintain communication and precise synchronization between a base station and each of multiple users, minimizing collisions between field units transmitting in adjacent time slots on the reverse link. This method reduces the frequency a field unit must rely on the use of a slotted aloha random access channel according to IS-95.